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EXAMINER

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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 10/069,983
Filing Date: March 14, 2002
Appellant(s): L'ALLORET, FLORENCE

Daniel J. Pereira
For Appellant

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GROUP 1700

EXAMINER'S ANSWER

This is in response to the appeal brief filed 01/09/2007 appealing from the Office action mailed 03/10/2006.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The following are the related appeals, interferences, and judicial proceedings known to the examiner which may be related to, directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal: 10/069,981 under Appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

No amendment after final has been filed.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is substantially correct. However, the claims have not been finally rejected over Ezaki et al. (JP 61245835).

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

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4,839,167	FOGEL ET AL.	12-1985
4,559,226	YAMAMOTO ET AL.	6-1989
4,274,977	KOERNER ET AL.	6-1981
5,338,352	BRENEMAN ET AL.	8-1994
EP 1055694	YABUTA ET AL.	11-2000
EP 583814	MAROY ET AL.	2-1994
EP 629649	MAROY ET AL.	12-1994

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claims 44-46, 104, 110, 116, 119, 125, 126, 131, 134-136 and 143-144 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter that was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Support for the new language in the independent claim 44, wherein the polymer is explicitly water-soluble in the specific range of 5 to 80°C at a concentration of at least 10 g/l, is not found in the originally filed description. Thus, this limitation represents new matter,

Claims 44-46, 104, 110, 116, 119, 125, 126, 131, 134-136 and 143-144 are rejected under 35 U.S.C. 102(b) as being anticipated by Merchant Jr. et al.

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In col. 3, lines 39-50, Merchant Jr. et al. teach adding to water, for the purpose of lower its surface tension and separating from oil, a water-soluble polymer demulsifier having water-soluble units and at least one unit consistent with the LCST (lower critical solution temperature or cloud point) units defined in pages 13-16 of the present specification, exemplified by oxyalkylated amines, glycol resin esters, oxyalkylated polyols and oxyalkylated alky-phenol formaldehyde resins. (see col. 5, lines 50-66). The demulsifier of Merchant et al. must be water-soluble at room temperature (around 25°C), even at five times the concentration of 10 g/l required by appellant (see col. 5, lines 33-49 of Merchant Jr. et al.), fallen within the range of water-solubility presently claimed.

Thus, the requirements for rejection 35 U.S.C. 102(b) have been met.

Claims 44-46, 104, 110, 116, 119, 125, 126, 131, 134-136 and 143-144 are rejected under 35 U.S.C. 102(b) as being anticipated by Koerner et al.

In col. 2, lines 13-18, col. 5, lines 27-34 and the examples, Koerner et al. teach adding to water, a water-soluble emulsifier polymer (lowers surface tensions) with water-soluble units and at least one unit consistent with the LCST (lower critical solution temperature or cloud point) units defined in pages 13-16 of the present specification, such as water-soluble polyoxyethylene-polyoxypropylenemethylpolysiloxane, which only has a cloud point at 29°C (at four times the concentration required in the present claims), and thus is water soluble below 29 °C. (see col. 6, lines 24-28), fallen within the range of water-solubility presently claimed.

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Thus, the requirements for rejection 35 U.S.C. 102(b) have been met

Claims 44-46, 104, 110, 116, 119, 125, 126, 131, 134-136 and 143-144 are rejected under 35 U.S.C. 102(b) as being anticipated by Fogel et al.

In the abstract, col. 4, lines 46-48 and col. 7, lines 45-48, Fogel et al. teach adding to water, an emulsifying water-soluble polymer, with a cloud point of less than 15 °C, (meaning it is water soluble as any temperature below 15°C), wherein the water-soluble polymer is a polyether (polyoxyethylene) ester having water-soluble units and at least one unit consistent with the LCST units defined in pages 13-16 of the present specification.

Thus, the requirements for rejection 35 U.S.C. 102(b) have been met.

Claims 44-46, 104, 110, 116, 119, 125, 126, 131, 134-136 and 143-144 are rejected under 35 U.S.C. 102(b) as being anticipated by Yamamoto et al.

In col. 2, lines 10-46, Yamamoto et al. teach adding to water as an emulsifier, a water-soluble polymer having water-soluble units and at least one unit consistent with the LCST units defined in pages 13-16 of the present specification, represented by dimethylpolysiloxane polyoxyalkylene copolymer, with a cloud point up to 45°C, meaning it is water soluble up to 45, which is well within the range recited in the claims. Also, components E, exemplified by polyvinyl ether acid copolymers in Yamamoto et al. (see col. 3, lines 45-65) are water-soluble at room temperature, and are also consistent

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with the copolymers identified in appellant's specifications (pages 13-16 of present spec.), wherein the ether is the LCST group and the acid is the water-soluble group.

Thus, the requirements for rejection 35 U.S.C. 102(b) have been met.

Claims 44-46, 104, 110, 116, 119, 125, 126, 131, 134-136 and 143-144 are rejected under 35 U.S.C. 102(b) as being anticipated by Breneman et al.

In col. 2, lines 10-16, col. 2, line 53 to col. 3, line 7, col. 6, lines 34-67 and col. 7, lines 25-35, Breneman et al. teach adding to water a water-soluble organo-modified silicone polymer demulsifier having water-soluble units and at least one unit consistent with the LCST units defined in pages 13-16 of the present specification. The emulsifier has a cloud point up to 115 °C (the recited heating step at up to 100 °C, being preferably 15 °C above the cloud point), meaning it is water-soluble below 115 °C, fully encompassing the claimed water-solubility range. Further, the ether groups in Breneman et al. are both water-soluble units and are consistent with LCST definition, thus satisfy the requirements for both of the required units of the polymer.

Thus, the requirements for rejection 35 U.S.C. 102(b) have been met.

Claims 44-46, 104, 110, 116, 119, 125, 126, 131, 134-136 and 143-144 are rejected under 35 U.S.C. 102(b) as being anticipated by Yabuta et al.

In ¶'s 14, 97 and 100, Yabuta et al. teach adding to water, a water-soluble polymer having water-soluble units and at least one unit consistent with the LCST units defined in pages 13-16 of the present specification, and having a cloud point of up to 90

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°C, thus being soluble at temperatures less than 90 °C, fully encompassing the claimed water-solubility range of 5-80 °C.

Thus, the requirements for rejection 35 U.S.C. 102(b) have been met.

Claims 44-46, 104, 110, 116, 119, 125, 126, 131, 134-136 and 143-144 are rejected under 35 U.S.C. 102(b) as being anticipated by Maroy et al. (EP 583 814 or EP 629649).

In the abstract and page 2, line 50 to page 3, line 3, Maroy et al. (EP '814) teach a method for controlling viscosity and interface tension between water and oil (surface tension) comprising adding a sufficient amount of a water-soluble polymer comprising water-soluble units and other water-soluble units with an LCST, exemplified in page 8, lines 1-42 of Maroy et al. with the same copolymers identified by appellant in pages 13-16 of the preset specification, such as polymers having polyacrylic acid back bones grafted with LCST polyoxyethylene/polyoxypropylene polymer units (see the examples).

In the abstract, and col. 2, line 43 to col. 3, line 40, Maroy et al. (EP '649) teach a method for controlling viscosity and interface tension between water and oil (surface tension) comprising adding a sufficient amount of a water-soluble polymer comprising water-soluble units and other water-soluble units with an LCST, which are among the polymers specified by appellant in pages 13-16 of the preset specification, such as polymers having polyacrylic acid back bones grafted with LCST polyoxyethylene/polyoxypropylene polymer units (see the examples).

Thus, the requirements for rejection 35 U.S.C. 102(b) have been met

Claims 44-46, 104, 110, 116, 119, 125, 126, 131, 134-136 and 143-144 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 25-67 of copending Application No. 10/069,981. Although the conflicting claims are not identical, they are not patentably distinct from each other because it would be obvious to have the product of 10/069,981 from carrying out the method of the present claims.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

(10) Response to Argument

Regarding appellant's argument that "unlike the polymer defined in the claims, the polymers described in the cited prior art exhibited a cloud point (in other words, the polymers of the prior art are NOT water-soluble in a range of 5 to 80°C at a concentration of at least 10 g/l)", the suggestion that if a polymer exhibits a cloud point, it is not water soluble is simply wrong and baseless. Any polymers (with a few exceptions), even water-soluble polymers, can exhibit a cloud point at a given temperature (depending on the concentration of the solutions). The polymers only need to be water soluble somewhere within the claimed range of 5 to 80°C.

As demonstrated above, each of the cited referenced polymers that are water-soluble within the range claimed by appellant.

Further, because "the claims specifically require that the polymer is water-soluble in a range of 5 to 80°C at a concentration of at least 10 g/l" and the polymer

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does not exhibit a cloud point “within this range of 5 to 80°C at a concentration of at least 10 g/l”, does NOT mean that the polymer **absolutely** does not have a cloud point at any temperature. One of ordinary skill in the art would not interpret an absolute lack of a cloud point from the limitations recited in claim 44 for the polymer, as suggested by Appellant’s arguments.

Issue #1

Regarding the argument that “the specification clearly describes that at a concentration of 0.1% by mass (i.e., 10 g/l) the polymer remains soluble in the water at a temperature from 5 to 80°C”, appellant cites four separate locations that are supposed to provide evidence for said original description (page 2, lines 23-27 in relation to page 2, lines 2-8; page 6, lines 30-33, page 7, lines 10-11; and page 8, lines 32-35).

However, these sections, respective, recite the following:

“For each polymer concentration, a heat-induced demixing temperature is observed; it is higher than the LCST, which is the minimum point of the curve. Below this temperature, the polymer is water-soluble, and above this temperature, the polymer loses its water solubility...

“Thus, for cosmetic uses, it is advantageous to have available agents: - that allow cosmetic emulsions [*not solutions*] and foams to be stabilized [*not solublized*], especially over a wide temperature range (5°C-80°C)...

“According to the invention, it has been found that polymers comprising water-soluble units and units with an LCST with suitable demixing temperatures

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make it possible to obtain foams and emulsions [*not solutions*] ... that are stable [*not soluble*] in the temperature range from 5 to 80°C and that can give a wide range of textures...

"Water-soluble units [*not the polymer as a whole*] in these polymers are units that are soluble in water at a temperature of from 5°C to 80°C, to a proportion of at least 10 g/l and preferably at least 20 g/l."

Thus, while appellant's original disclosure provides a 5°C to 80°C range for the stability of emulsions in various applications, wherein the emulsions may contain several components, including non-polymeric emulsifier/surfactants, and while appellants provides support for the water-soluble portions of the copolymers to be water-soluble in a range of 5°C to 80°C, there remains no support for the final polymer itself, which also includes the LCST units, to be water-soluble in a range of 5°C to 80°C. Appellant has failed to demonstrate where support is found in the originally specification for the copolymer itself to be water-soluble in a range of 5°C to 80°C.

Regarding the references to In re Sorenson and In re Kaslow, support for individual monomer units to have a particular water-solubility range is not itself sufficient support for the same water-solubility range in a copolymer resulting from copolymerizing the monomer units, as the water-solubility of the copolymer will result from, among other things, the combination (averaging) of all the monomer units in the copolymer, not just the water-soluble ones. Thus, the originally filed disclosure does not reasonably convey to a person having ordinary skill that appellant had possession of the specific range of 5°C to 80°C for the water-solubility of the whole polymers in the claims.

Issue # 2

Regarding Merchant, Appellant continues to argue as if the maleic anhydride/alkyl phenol formaldehyde resin is the only copolymer of the LCST containing water-soluble polymer taught in Merchant. As stated above, Merchant also teaches including oxyalkylated amines, glycol resin esters, oxyalkylated polyols and oxyalkylated alkyl-phenol formaldehyde resins (the oxyalkylating groups are consistent with the defined LCST units and each of the amines, polyols and alky-phenol formaldehyde resins are consistent with the defined water-soluble units). (See pages 13-16 of the preset specification)

Further, even the oxyalkylated alkyl-phenol formaldehyde resins (taught in col. 6) of Merchant are not limited to the p-nonyl phenyl formaldehyde resin of Example 1 referenced by appellant. It is well settled that anticipatory teachings are not limited to any particular embodiment/example. In re Boe, 148 USPQ 507 (CCPA 1966). Disclosed examples and preferred embodiments (even if the embodiments tested by appellant were preferred) do not constitute a teaching away from a broader disclosure. In re Susi, 440 F.2d 442, 169 USPQ 423 (CCPA 1971). Thus, the argument with regard to "the Malcolm Publication" is not persuasive, as they are limited to only one of the many embodiments taught in Merchant et al. A variety of the claimed copolymers, with water-solubility within the claimed range, are still taught by Merchant et al.

Regarding the argument that "Merchant does not provide the requisite disclosure to select monomers of water-soluble and LCST units and arrange them in the manner

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that would be the same as the polymer defined in the claimed method”, appellant claims 44, which appellant presents as being representative of the claimed invention, only requires the presences of the water-soluble and LCST units in the polymer and any (co)polymer, such as the oxyalkylated amines and oxyalkylated polyols, each specifically named in Merchant et al. (see col. 5, lines 50-66), wherein the oxyalkylating groups are consistent with the defined LCST units and the amine and polyol group are water-soluble units). Thus, no selection/arrangement of monomer units is necessary.

The whole copolymers are taught

Regarding claim 104, oxyalkylene groups are added to the amine or poly backbones.

Regarding claim 116, each of the MW's recited in col. 5 and 6 are within the range claimed by appellant.

Issue #3

Regarding Yamamoto et al. and the argument that none of the polymers in Yamamoto et al. are the types of polymers claimed, Appellant is directed to the dimethylpolysiloxane polyoxyalkylene copolymer and the polyvinyl ether acid copolymers explicitly recited in Yamamoto et al. (see col. 3, lines 45-65). (Also see above rejection)

Regarding US serial no. 10,069,981, the particulars of the prosecution of another appellant have no direct bearing on the present prosecution. Further, if the claims were

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the same in both applications, both applications would have been rejected under statutory double patenting.

Issue #4

Regarding, appellants arguments that Breneman "describes a polyether modified polysiloxane, which is a copolymer of hydrophilic and hydrophobic monomers" then goes on to argue "Brenemann polymers do not contain water-soluble units and the specific types of LCST units in the polymer ", as stated above, the polyether groups in Breneman et al. are both water-soluble units and are consistent with LCST definition, thus satisfy the requirements for both of the required units of the polymer.

Again, the particulars of the prosecution of another application have no bearing on the present prosecution. Further, if the claims were the same in both applications, both applications would have been rejected under statutory double patenting.

Issue #5

There is no Issue #5 as the claims have not been finally rejected over Ezaki et al.

Issue #6

Regarding Koerner, in col. 2, lines 13-18, col. 5, lines 27-34 and the examples, Koerner et al. teach the water-soluble emulsifier polymers with both water-soluble units and at least one LCST unit, such as water-soluble polyoxyethylene-polyoxypropylenemethyl polysiloxane, which has a cloud point at 29°C and thus is water soluble below 29 °C. (see col. 6, lines 24-28), falling well within the range of water-

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solubility presently claimed. Again, appellant's claims do not require that the present polymers not have a cloud point, as suggested in the arguments. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Issue #7

Again, regarding Foger et al., it is noted that the feature upon which appellant relies (i.e., wherein the polymer has polymer no cloud point) is not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Further, appellant's arguments actually support the rejection. Appellant admits that "[t]hese polyoxyethylene portions are the water-soluble portion of the alkoxylate esters ... and (R2)_x is the LCST portion of the alkoxylate ester."

Even if the copolymers of Foger et al. had cloud points at 65°C as suggested by appellant, they would still be water-soluble below 65 °C, and thus within the claimed water-solubility range of 5 to 80°C.

Issue #8

Regarding Yabuta and the argument that their polymer has a cloud point, again, the lack of any cloud point is not part of the claim language. Although the claims are

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interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

As stated above, (in ¶s 14, 97 and 100) Yabuta et al. teach the a water-soluble polymers to having a cloud point of up to 90 °C, thus be soluble at temperatures less than 90 °C, fully encompassing the claimed water-solubility range of 5 to 80°C.

Issue #9

Regarding “the Maroy publications”, contrary to appellant’s arguments, the Maroy publications teach the same specific polymers containing LCST units described in appellant’s specification is being consistent with the claimed polyoxyalkylene grafted polyacrylic acid polymers in the Maroy publications (above).

Even if the water-soluble/LCST copolymers described in “the Maroy publications” had cloud points at 100°C as suggested in appellant’s arguments, that would make them soluble at temperatures less than 100 °C, fully encompassing the claimed water-solubility range of 5 to 80°C. Appellant is reminded that the present claims are not to the LCST units or a method of using the units.

Also, contrary to appellant’s arguments, the polymers are not defined in the claims as “having a demixing temperatures of 5 to 40°C at 1% by mass in water”. This limitation is recited in the claims with regard to the LCST groups used in prepare the actual water-soluble polymers, not the polymer themselves. Appellant appears to be confused about what they are actually claiming versus what they feel entitled to claim.

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All the arguments regarding the demixing temperature of the polymer, which is not actually being claimed, are not relevant to the appeal.

As such, the rejections are maintained.

(11) Related Proceeding(s) Appendix

Copies of the court or Board decision(s) identified in the Related Appeals and Interferences section of this examiner's answer are provided herein.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

KCE



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